Utopia or Oblivion
The Image of the 1960s

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Is it possible for a single image or a set of images to define an era, a period, or a decade? Historians often seem to think so, for most have their canonic images by which they organize their material. It is as if each period wears its unique face or possesses its persona, as if each decade or period of time is driven by a particular spirit. I don't want to raise the very old Germanic problem of historicism, but how valid are images as a way to teach or understand history?

For instance, let us take the 1920s. What are the iconic images that historians of modern architecture, even today, would choose to condense or represent it? Would it be the rationalist geometry of Le Corbusier's Villa Savoye or perhaps the brash technological gumption of the Chrysler Building? Someone else might choose the abstract idealism of Mies's Glass Tower project of 1922, or perhaps his Barcelona Pavilion of 1929. But few, I think, would select Frank Lloyd's Wright's project for the National Life Insurance Company of 1924, a project that, with its glass and green copper cladding, rarely finds its way into history books even though it is a building that in its structural audacity, technological thinking, and flexible planning is arguably more advanced than these other projects. Wright's innovative design was so little known in its time that, according to one report, Philip Johnson, in discussing the makeup of the International Style Exhibition in 1929, rejected Wright's inclusion into the show on the grounds that he was dead. He was actually quite alive and living in New York City for much of that year.

It can thus be argued that images, or rather our choice of images, often conceal as much as they reveal of history. Saying this another way, the way it might have said it in the late-1970s, they often define a certain pleasure of absence. But of course this conference is more about considering how and why images change or define the architectural tenor of a particular period, inscribe its history as it were. If this is the case, might this image of a new Zero-Energy tower in the Chinese city of Quangzhou, designed a few months ago by the Chicago office of SOM, become one of the defining moments of the present? (fig. 1) Yet, one might just as well argue that this design, with its aerodynamically formed, digitally optimized surfaces feeding the building's updrafts and downdrafts into the wind turbines located in the openings rather illustrates perfectly Reyner's Banham's paradigm of the First Machine Age, that is, the machine as the quintessential metaphor for architectural design. Which decade does it represent then? The first decade of the 21st century, or the 1960s, or the 1920s?

Despite these problems, many over the past two days have given us insights into the power of images and their capacity to define something new, to seduce or to please us, to accelerate thought or the design process, to lead us to new and unexplored frontiers of architectural thinking. Accepting this premise, then, let me turn to the decade of the 1960s, of which I would like to speak today. What might be a suitable image to congeal the spirit of

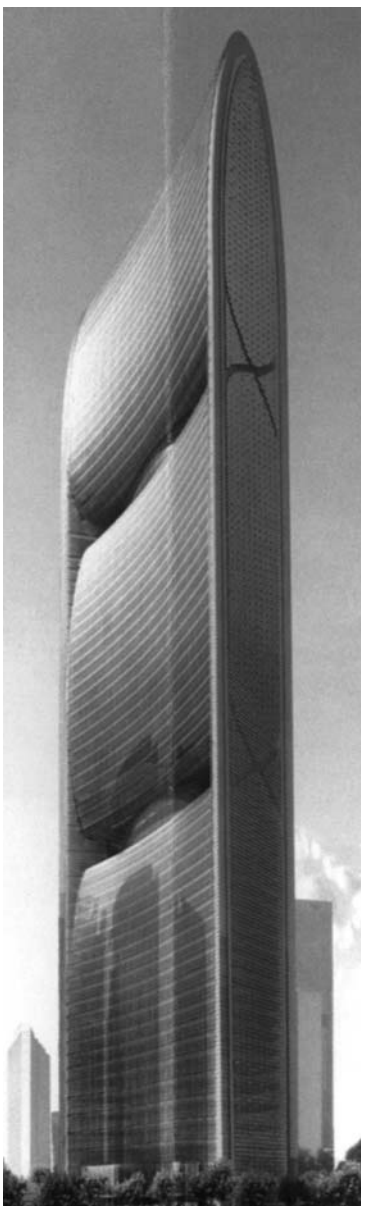

Fig. 1: Skidmore, Owings & Merrill, Pearl River Project, China

this decade? Could it be Kenzo Tange's plan of 1960 for extending the city of Tokyo into the bay, a design notable for its compelling logic and megastructural recognition of the future problems of urban growth? Or perhaps from the same era, we might choose Arata Isozaki's *City in the Sky*, a fractured, quasi-nostalgic view of the classical past in transition toward a brave new future infused with technological stamina? Or, one could argue that maybe it is this image or Bob Venturi's Guild House of 1962, perhaps the image of the quintessential or defining moment of theoretical heresy with respect to high modernism?

Then again, we might select François Dallegret's rendering of Banham's counter-cultural environmental bubble of 1965, the home that is "Not a House," in which we find, in Banham's words, "a properly set-up standard-of-living package breathing out warm air along the ground (instead of sucking in cold along the ground like a campfire), radiating soft light and Dionne Warwick in heart-warming stereo, with a well-aged protein turning in an infrared glow in the rotisserie, and the icemaker discretely coughing cubes into glasses on the swing-out bar—this could do something for a woodland glade or creekside rock that *Playboy* could never do for its penthouse."[1]

As much as I do not want to discount the happiness that this vision implies, I am instead going to propose another image for the 1960s, a non-architectural image. Yet it is one that, I will argue, has everything to do with the advanced architectural thinking of this decade (fig. 2). It is this photograph taken by NASA astronauts during the Apollo 8 mission to the moon in 1968. I must confess there are other images that might satisfy this same concept, such as the cover image of the first issue of the *Whole Earth Catalog*, also published 1968 (fig. 3).

In my defense of this image, let me begin with R. Buckminster Fuller and with an image that for three-quarters of a century architects and historians of architecture have always felt very uneasy about viewing. I mean this image of Fuller's Dymaxion house of 1928, his prototype for a completely sustainable machine-for-living, and what *Brooklyn Eagle Magazine*, in 1932, referred to as the "House of 1982." (fig. 4)

I must first confess that I like this image especially because for so long it has been so unpopular with architects and historians. The house was to be built of aluminum and a biodegrable plastic called casein, derived from milk. Cooking and sanitation units were to be pre-fabricated modules that reprocessed wastes. Water was to be captured from rain and from wells and recycled, and electricity was to be generated from wind turbines and solar panels. All of this, of course, was 1928.

In fact in discussing the 1920s with my students, I like to show them three houses conceived or under construction in 1928, the Villa Savoye, Richard Neutra's Lovell Health House, and Fuller's Dymaxion House. I ask the students to rate their relative architectural importance, and in order to

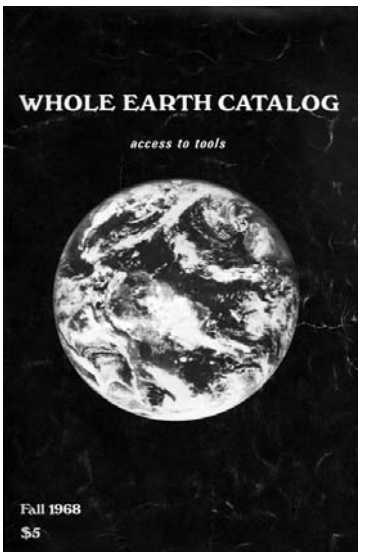

Fig. 3: Cover of Whole Earth Catalogue, 1968

Fig. 2: Photograph from Apollo 8, NASA online images

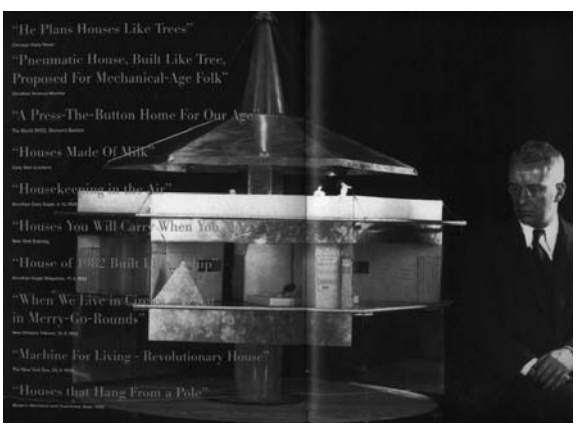

Fig. 4: R. Buckminster Fuller, Dymaxion House, 1928

provoke debate I begin with the statement that the Villa Savoye is the most overrated design of the 1920s, the Health House is the most sophisticated house built in that decade (even though it too somewhat rarely appears in history textbooks), and the Dymaxion House is the most creative act of design thinking of the decade. Interestingly, students today, as opposed to those of a decade ago, rarely offer any opposition to my Socratic gesture, while on the contrary they seem puzzled, even perplexed, as to why the Villa Savoye should had been afforded so much attention by earlier generations of architects and historians.

After designing his house, Fuller went on to do many other things, such as his Dymaxion Car of 1932 (fig. 5). Behind the automobile, incidentally, is another building that rarely makes its way into history books. It is George Fred Keck's "Crystal House," which, as Norman Foster once recognized in the 1970s, was the first building in the twentieth century to employ fully glazed walls with a triangular steel-truss structure on the exterior, one inspiration for Foster's own design for the Sainsbury Centre for the Visual Arts.

Fuller's work continued, and in 1938 he began working for *Fortune Magazine*, and it was there that he began the task of cataloguing the world's natural resources. One of his arguments at this date was that coal and oil should be replaced as sources for electrical production. Another favorite Fuller image of mine is his Dymaxion Map, which he devised in the early 1940s (fig. 6).

Talk about the power of an image to transform the way the humans think! I am sure that most of you, like me, were schooled in a classroom that featured a flat map of the world, at which I, as a child, would occasionally glance and ponder those far-far-away places such as China. With the map's fixed East-West orientation, It certainly never occurred to me that that the shortest route by plane from New York to Beijing is actually directly over the North Pole.

But let me return to the 1960s and our interspatial theme. Here is a photo taken from the Mercury mission of Alan Shepherd, circling the earth in 1961 (fig. 7). it is notable because three weeks after this image was taken, President Kennedy announced the ambition to land a man on the moon by the end of the decade, a pledge that, when funded by congress, had the secondary benefit of opening up an abundance of research monies to the scientific community to study the problems of space travel, which is at heart an issue of sustainability. Thus in 1963 Buckminster Fuller became a consultant to the Advanced Structures Research Team at NASA. I am not sure what he did, but this was one year after Rachel Carson published her environment tract, *Silent Spring*, one of the first books to address the problems of human pollution.

Today, Fuller's name in the 1960s is often associated with the Geodesic Dome and only with the dome, and this association in my view again conceals his much more important contribution to architecture, which came about, at least in part,

Fig. 5: R. Buckminster Fuller, Dymaxion Car, 1932

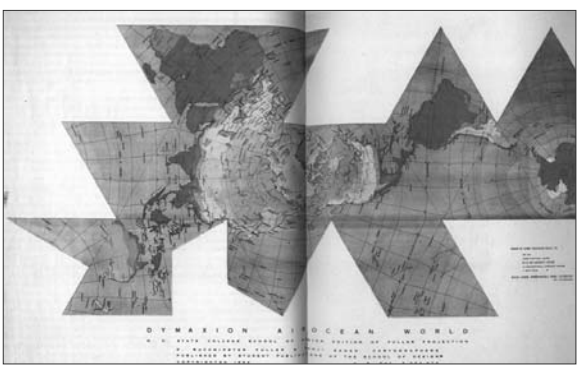

Fig. 6: R. Buckminster Fuller, Dymaxion Map, 1942

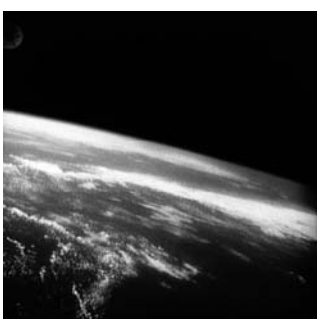

Fig. 7: Photograph from Mercury 3

through the space program. For in applying the idea of an interspatial ecosystem back to earth—Fuller in fact returned to a theme that had long been an interest of his research. This was the theme that formed the topic of his 1963 book, *Ideas and Integrities*, in which he wrote that "space technology's autonomous living package and the automobile industry's engagement in livingry devices clearly indicate that the coming decade will see the mass production of autonomous living mechanics for use on earth."[2]

The space program and automobile research, in Fuller's view, must solve the world's housing problems because the "old building arts"—read architecture—had in essence failed to keep up with advancing technologies and were in any case accommodating the housing needs of only 40% of the world's population. This was also, not coincidentally, a theme echoed in 1963 in the "Delos Declaration," a pledge signed by Fuller and thirty-three other intellectuals who visited the Delos after an eight-day cruise of the Greek islands. The cruise, which was patterned after the trip from Marseilles to Athens in 1933 that produced the Athens Charter, had been the brainchild of the architect and urban planner Constantinos Doxiadis, who gathered experts in various fields in an attempt to come up with a science (ekistics) to curb random global growth.

Thus the idea of "world planning" became the keynote theme of Fuller's efforts in the second half of the 1960s, just as the very new notion of "Spaceship Earth" began to capture the imagination of others as well, beginning with Barbara Ward's book of the same name that appeared in 1966.[3] One year earlier, Kenneth Boulding had prepared a very interesting paper for the NASA Committee on Space Sciences entitled "Earth as a Space Ship." In it he lambasted the fledgling ecological movement—for failing to see the implications of unrestrained population growth and the pollution of the ecosystem. He began his paper by noting that in the good "old days," humans could destroy their environments with impunity as long as the destruction was local, for then the tribe simply moved to a new spot. "Now man can no longer do this," he goes on to say, "he must live in the whole system, in which he must recycle his wastes and really face up to the problem of increase in material entropy which his activities create. … In a space ship, there are no sewers."[4]

Boulding also went on to emphasize the need to shift from fossil fuels and ores to energies harnessed from the oceans and sun, and the imperative of his generation to study the earth's system of checks and balances. He further noted: "We do not understand, for instance, the machinery of ice ages, the real nature of geological stability or disturbance, the incidence of volcanism and earth-quakes, and we understand fantastically little about that enormously complex heat engine known as the atmosphere."[5]

By education, Ward was a political scientist and Boulding was an economist, but these disciplinary boundaries had all but dissipated around the environmental issues raised during these years. Fuller's response in 1965 was again straight- forward. He launched the World Design Science Decade, a project that he originally intended to unveil at Expo '67 in Montreal. Better known as the World Game, the object of this pursuit was to hook up computers—another technological innovation of the 1960s—with college students from around the world in order to catalogue and study global resources and the most efficient ways of employing them. The project, originally centered at Southern Illinois University, came to fruition in the summer of 1969 and within a few years thousands of students were participating on campuses internationally, many in makeshift geodesic domes.

Fuller supported all of this with a bevy of books directed to environmental themes: *Utopia or Oblivion* (1969), *Operation Manual for Spaceship Earth* (1969), *I Seem to be a Verb* (1970), *Approaching the Benign Environment* (1970), *Intuition* (1972), and *Earth, Inc.* (1973). He was not alone in these endeavors. His colleague John McHale, who had been very close with Reyner Banham, co-produced with Fuller in 1963 the *Inventory of World Resources*. In 1969 McHale wrote *The Future of the Future* and, one year later, *The Ecological Context*. Also in 1969, the Scottish-born professor at the University of Pennsylvania, Ian McHarg, published his enormously influential book *Design with Nature*, which had a major impact on the reform of academic curriculums[6] (fig. 8).

And then we have the extraordinary labor of Frei Otto at the Institute for Lightweight Structures in Berlin, and later Stuttgart, as we find in this summary of papers given at the colloquium held in Berlin in May 1971, entitled *Biology and Building* (fig. 9).

This journal and Otto's research in fact capped a decade of activity by this Fulleresque generalist and ecologist. Otto summarized what would be his recurring theme in his opening essay: "The relationship between biology and building is now in need of clarification due to real and practical imperatives. The problem of the environment has never before been such a threat to existence. In effect, it is a biological problem."[7]

This statement is similar to the view of Howard T. Odum, which he expressed in one of the more fascinating books of this period, *Environment, Power and Society* (1971). In the book, Odum, an ecologist, takes the macroscopic perspective of an astronaut circling the earth and reduces the biosphere (including humans and such human exercises

Fig. 8: Ian L McHarg, Cover of Design with Nature, 1969

Fig. 10: Photograph from Apollo 8, NASA online images

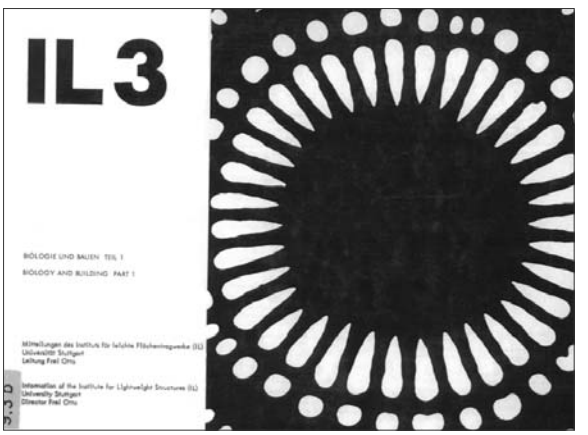

Fig. 9: Frei Otto, Cover of IL3, "Building and Biology," 1971

as law, politics, and religion) to closed energy systems operating within the larger whole, but sustained by the limited energy of the sun. The principal cause of the present energy degradation, he observes, is the "accelerating outflow of potential energy from fossil-fuel supplies," for which he proposes a federal program of "ecological engineering" similar in size to that of NASA.[8]

Again, this is 1971, and I think we can all see the similarity of these proposals to many of the international declarations of the past ten years, which today are having such a profound effect on the practice of architecture. But what happened in between, say between 1971 and 1992, when Will McDonnough wrote the *Hannover Principles*? What happened to Fuller, who in 1971 was a global phenomenon basking in laudatory press reviews and ceremonial accolades, someone who was feted on every continent, yet someone who within a few years would literally be himself cast into oblivion?

Well one of the things that happened, certainly, was the postmodern phenomenon, and within a few years there followed the automobile crash of Maranetti's metanarrative also known as poststructuralism, that which Michael Hays will so eloquently discuss in a few minutes. But there were other issues also at work here and in a curious way they take us back to the problematic nature of images: images seen and unseen, and their capacity to conceal as much as to reveal. For while the avant-garde journals of the 1970s and 1980s consumed the new fashions of postmodernism, critical regionalism, and deconstruction, that bugaboo of technology did not cease to interest a few architects. We might think of Chicago's John Hancock Tower, designed in 1965, where Fazlur Khan's creation of a diagonal tube structure that Fmore than doubled the economic height of a residential/office structure by considerably expanding the efficiency of a steel structure. Or, there is Güther Behnisch's Olympic Stadium here is Germany, designed with the assistance of Frei Otto. Again, we might think of Fumihiko Maki's Wacoal Media Center, started in 1982, where Maki developed his idea of an "industrial vernacular." Here the metallic finishes in different planes of transparent and translucent glazing engage the spectator with a visual symphony of high-tech layered effects, recalling, in a curious way, Colin Rowe and Robert Slutzky's "transparent" reading of Le Corbusier.

One can also trace this technological line of development very distinctly in the work of Richard Rogers and Norman Foster, where the ephemealized spirit of Fuller and Otto meet the legacy of Reyner Banham. The Willis Faber & Dumas building in Ipswich, designed in the early 1970s at least tentatively invokes Fuller's idea of a "Climatroffice," the notion of an ecologically balanced, open, planted "living office" under a large lightweight structure. A more genial explication of this theme, however, came with the design of Commerz Bank in Frankfurt in the late-1990s, but the consummation of this process takes place in the Swiss Re building in London of 2003, the building in which Fuller's notion of spaceship earth finds its most lucid, if not literal interpretation by Foster.

All of which brings me back to my preferred image of the 1960s, or should I expand this decade to circumscribe our present era? (fig. 10)

I like this photograph because the earth is so small and unfocused, because its fragile biosphere, and the life that goes with it, is scarcely visible. I also like it because I think it underscores something very important about the power of an image as well as about architecture, and that is from the perspective of outer space, this quarter-century separation between theory and practice, three-quarters of a century if we take the idea of sustainability all the way back to 1928, at this scale does not seem that significant at all. The poet T. S. Eliot once made this point most explicitly:

Between the idea
And the Reality
Between the motion
And the act
Falls the Shadow.

Notes

1 Reyner Banham, *A Home is Not a House*, in *Art in America* (March 1965); cited from Joan Ockman (ed.), *Architecture Culture 1943–1968,* New York: Columbia Books of Architecture, 1993, p. 375.
2 R. Buckminster Fuller, *Ideas and Integrities: A Spontaneous autobiographical Disclosure*, ed. by Robert W. Marks, New York: Collier books, 1963, p. 270.
3 Barbara Ward, *Spaceship Earth,* New York: Columbia Univ. Press, 1966. The book was based on a series of lectures given in 1965.
4 Kenneth Boulding, *Earth as a Spaceship*, May 10, 1965, Washington State University, Committee on Spaces Sciences, in Kenneth E. Boulding, *Papers, Archives* (Box #38), University of Colorado at Boulder Libraries.
5 Ibid. See also Kenneth Boulding, *The Economics of the Coming Spaceship Earth*, in *Environmental Quality in a Growing Economy*, ed. Henry Jarrett, Baltimore: Johns Hopkins Univ. Press, 1966, pp. 3–14.
6 Ian McHarg, *Design with Nature,* Philadelphia: Natural History Press, 1969.
7 Frei Otto, *Biology and Building*, IL 3, 15 October 1971, p. 7.
8 Howard T. Odum, *Environment, Power, and Society,* New York: Wiley-Interscience, 1971, p. 306.